

# Elements of Defense Transformation



## Report Documentation Page

*Form Approved  
OMB No. 0704-0188*

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

|                                                                                                                                                                         |                                    |                                             |                                     |                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------------|-------------------------------------|------------------------------------|
| 1. REPORT DATE<br><b>OCT 2004</b>                                                                                                                                       | 2. REPORT TYPE<br><b>N/A</b>       | 3. DATES COVERED<br><b>-</b>                |                                     |                                    |
| 4. TITLE AND SUBTITLE<br><b>Elements of Defense Transformation</b>                                                                                                      |                                    | 5a. CONTRACT NUMBER                         |                                     |                                    |
|                                                                                                                                                                         |                                    | 5b. GRANT NUMBER                            |                                     |                                    |
|                                                                                                                                                                         |                                    | 5c. PROGRAM ELEMENT NUMBER                  |                                     |                                    |
| 6. AUTHOR(S)                                                                                                                                                            |                                    | 5d. PROJECT NUMBER                          |                                     |                                    |
|                                                                                                                                                                         |                                    | 5e. TASK NUMBER                             |                                     |                                    |
|                                                                                                                                                                         |                                    | 5f. WORK UNIT NUMBER                        |                                     |                                    |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)<br><b>Office of Force Transformation Office of the Secretary of Defense<br/>Department of Defense Washington, DC</b> |                                    | 8. PERFORMING ORGANIZATION<br>REPORT NUMBER |                                     |                                    |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)                                                                                                                 |                                    | 10. SPONSOR/MONITOR'S ACRONYM(S)            |                                     |                                    |
|                                                                                                                                                                         |                                    | 11. SPONSOR/MONITOR'S REPORT<br>NUMBER(S)   |                                     |                                    |
| 12. DISTRIBUTION/AVAILABILITY STATEMENT<br><b>Approved for public release, distribution unlimited</b>                                                                   |                                    |                                             |                                     |                                    |
| 13. SUPPLEMENTARY NOTES<br><b>The original document contains color images.</b>                                                                                          |                                    |                                             |                                     |                                    |
| 14. ABSTRACT                                                                                                                                                            |                                    |                                             |                                     |                                    |
| 15. SUBJECT TERMS                                                                                                                                                       |                                    |                                             |                                     |                                    |
| 16. SECURITY CLASSIFICATION OF:                                                                                                                                         |                                    | 17. LIMITATION OF<br>ABSTRACT<br><b>SAR</b> | 18. NUMBER<br>OF PAGES<br><b>20</b> | 19a. NAME OF<br>RESPONSIBLE PERSON |
| a. REPORT<br><b>unclassified</b>                                                                                                                                        | b. ABSTRACT<br><b>unclassified</b> |                                             |                                     |                                    |



## Foreword

When Secretary of Defense Donald H. Rumsfeld established the Office of Force Transformation on October 29th 2001, the events of September 11th had focused considerable attention on the urgent requirement for defense transformation. During those extraordinarily difficult days, it was easy to think of the future of transformation in the Department as a narrow consequence of 9/11. Over the past several years, however, it has become increasingly clear that defense transformation is not simply a response to global terrorism. While the events of September 11th triggered a “system perturbation”—a systemic shock to the stability of the international system—profound change was already occurring in that system. Thus, the establishment of the Office of Force Transformation signified not just a reaction to terrorism, but rather Secretary Rumsfeld’s overall commitment to the process of transformation within the Department.

The need to transform the U.S. Armed Forces, as well as the organizations and processes that control, support, and sustain them, is compelling. This need is a by-product of the effects of globalization on the international security order and the transition from the industrial age to the information age. And while we might point to a beginning of transformation, we cannot foresee the end. President George W. Bush’s mandate for defense transformation was “to challenge the status quo and envision a new architecture of American defense for decades to come.” Both he and Secretary Rumsfeld view transformation as a continuing process, one that not only anticipates the future, but also seeks to create it.

This document is intended to provide an understanding of the key elements of defense transformation. To that end, this brochure seeks to answer some fundamental questions about defense transformation. What is defense transformation and what is its scope? Why is transformation so urgent? In general, how will defense transformation be accomplished? What is the Department’s force transformation vision for the future and what is needed to support this vision? What are the primary senior leadership roles and responsibilities for implementing the force transformation strategy? What are some of the key force transformation issues requiring additional investment in the years ahead? How can we measure the effectiveness of our force transformation process?

Transformation is a key component of the U.S. defense strategy and will affect everyone in the Department as we seek creative, innovative solutions to the challenges we face at home and abroad.

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*"We need to change not only the capabilities at our disposal, but also how we think about war. All the high-tech weapons in the world will not transform the U.S. armed forces unless we also transform the way we think, the way we train, the way we exercise, and the way we fight."*

*Secretary of Defense Donald H. Rumsfeld  
at the National Defense University,  
January 31, 2002*

## Defense Transformation

### **What Is Defense Transformation?**

In the April 2003 *Transformation Planning Guidance (TPG)*, Secretary of Defense Rumsfeld identifies transformation as:

*A process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people, and organizations that exploit our nation's advantages and protect against our asymmetric vulnerabilities to sustain our strategic position, which helps underpin peace and stability in the world.*

Transformation is more than just acquiring new equipment and embracing new technology. It is rather the all encompassing process of thinking creatively in order to work better together with other parts of the Department and other agencies within the U.S. Government. It also means working better with our numerous coalition allies, leveraging new technologies and operational concepts in order to create U.S. and coalition advantage against current and potential future adversaries.

Transformation should be thought of as a process, not an end state. Hence there is no foreseeable point in the future when the Secretary of Defense will be able to declare that the transformation of the Department has been completed. Instead, the transformation process will continue indefinitely. Those responsible for defense transformation must anticipate the future and wherever possible help create it. They must seek to develop new capabilities to meet tomorrow's threats as well as those of today.

Defense transformation is a vital component of U.S. defense strategy and more broadly, the nation's overall security strategy, as set forth in *The National Security Strategy of the United States of America (NSS)*. Like the *NSS* and the U.S. defense strategy, of which it is an integral part, defense transformation takes into account the increasingly porous boundaries between political, economic, and military domains as a result of rapid technological advances and the impact of globalization in the early 21st Century. The U.S. has competitive advantages in space technology, information technology, intelligence, and logistics, as well as in global economic reach, and we must ensure that we retain and capitalize upon these advantages as we transform our military forces.



## Scope of Defense Transformation

Overall, the scope of defense transformation encompasses three major areas: how we do business inside the Department, how we work with our interagency and multinational partners, and how we fight.

- **Transforming How We Do Business:** The Department is currently seeking to identify and adopt transformational business and planning practices more suited to the compressed time cycles of the 21st century. These include adaptive planning; a more entrepreneurial, future-oriented, capabilities-based resource allocation planning process; accelerated acquisition cycles built on spiral development; output-based management; and a reformed analytical support agenda.
- **Transforming How We Work with Others:** In the wake of the attacks of September 11th, there is an increased premium on defining new and more efficient ways of interacting with other agencies of the U.S. Government and with our multinational partners. Enhanced interagency coordination within the U.S. Government, as well as improved coordination across all levels of government (federal, state, and local), will promote increased cooperation, more rapid response, and the ability to conduct seamless operations. As the U.S. military transforms, we must ensure that rapidly transforming U.S. military capabilities can be applied effectively in concert with multinational and interagency capabilities.
- **Transforming How We Fight:** The strategy for transformation presented in the *TPG* includes a detailed approach to force transformation, or the transformation of how we fight. Force transformation depends on the innovative development of future joint warfighting concepts and the experimentation necessary to evaluate these new concepts under rigorous combat simulation conditions at our various national training facilities, incorporating lessons learned from recent operations in Afghanistan and Iraq and other aspects of the ongoing global war on terrorism.

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*"First and foremost, the President and the Secretary elevated transformation to the level of strategy, and that is probably the most important lens through which we should look at transformation."*

*Vice Admiral (Ret.) Arthur K. Cebrowski,  
Director Office of Force Transformation,  
Prepared Statement for the House  
Appropriations Committee,  
March 13, 2002*

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*“Putting transformation on the back burner and focusing solely on the fight at hand is simply not an option. We are fighting a war unlike any we have fought before – it demands new ways of thinking about military force, new processes to improve strategic agility, and new technologies to take the fight to the enemy.”*

*Chairman of the Joint Chiefs of Staff,  
General Richard Myers,  
February 4, 2004*

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## **Defense Transformation - Why?**

Some have questioned the urgent need to transform what are widely acknowledged as the world's best military forces. However, history indicates that merely attempting to hold on to existing advantages is a shortsighted approach that has frequently proven disastrous. The continuing threat posed by terrorist networks and weapons of mass destruction (WMD), compels us to accelerate our efforts. At least four imperatives, *(as shown in Figure 1)*, lend urgency to the need to transform now: strategy, threat, technology, and risk mitigation.

- **Strategic Imperative:** In the post-Cold War period, when the U.S. appeared to have no peer competitors, and even more so in the post-9/11 world, where the battlefield appears to have no boundaries, senior defense planners have had to assume that surprise is the norm rather than the exception and build a capabilities-based, rather than threat-based force. Our new defense strategy requires agile, network-centric forces that can take action from forward positions, rapidly reinforce from other areas and defeat adversaries swiftly and decisively.
- **Threat Imperative:** At the same time, we are operating in a less predictable threat environment than we faced before 1990, with many more axes of approach to defend against, both at home and abroad. Regional powers are developing capabilities to threaten stability in areas critical to U.S. interests. Both state and non-state adversaries are attempting to compensate for U.S. military superiority by developing asymmetric capabilities. And the proliferation of chemical, biological, radiological and nuclear (CBRN) capabilities raises the specter of such weapons falling into terrorists' hands. Non-state actors using the international sea lanes and airways of global commerce have also greatly diminished the protection that the U.S. was afforded by geographical distance in the past.

- **Technological Imperative:** Access to highly capable, low cost technologies has lowered the barriers to competition in areas where the U.S. previously enjoyed uncontested advantage. These technological advances create the potential for new forms of competition in space and cyber-space; they also increase the potential for miscalculation and surprise, particularly involving WMD and their delivery systems. Our defenses against such attacks need to be continuously updated, refined and exercised.

- **Risk Mitigation Imperative:** The Department's risk management framework envisions four categories of risk: **force management risk** (the continuing challenge to recruit, train, and retain the right caliber of personnel to prevail in combat), **operational risk** (the ability to support near-term contingencies and operations), **future challenges risk** (the challenge of investing in new capabilities for the future) and **institutional risk** (the challenge of ensuring that we manage our resources effectively). As we attempt to create the force for tomorrow, we must carefully balance the needs of today. Today's forces need to be more agile and lethal so that they are not being put at risk as the Department rebalances its investment towards designing and building the forces of the future.

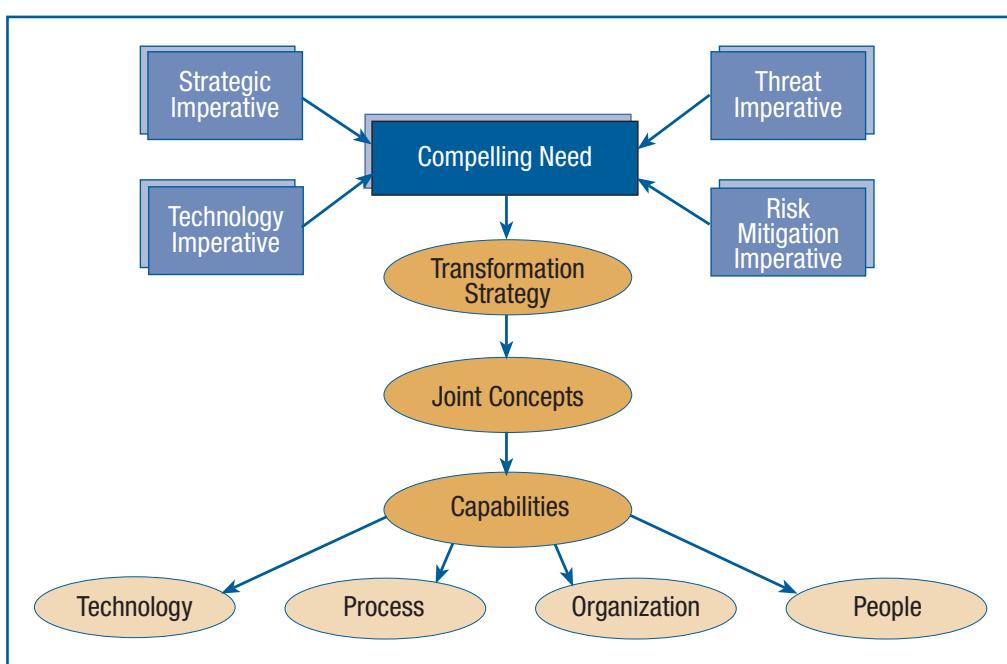


Figure 1: Compelling Need for Transformation

*“...We must transform not only our armed forces, but also the Department that serves them by encouraging a culture of creativity and intelligent risk taking. We must promote a more entrepreneurial approach to developing military capabilities, one that encourages people, all people, to be proactive and not reactive, to behave somewhat less like bureaucrats and more like venture capitalists; one that does not wait for threats to emerge and be ‘validated,’ but rather anticipates them before they emerge and develops new capabilities that can dissuade and deter those nascent threats.”*

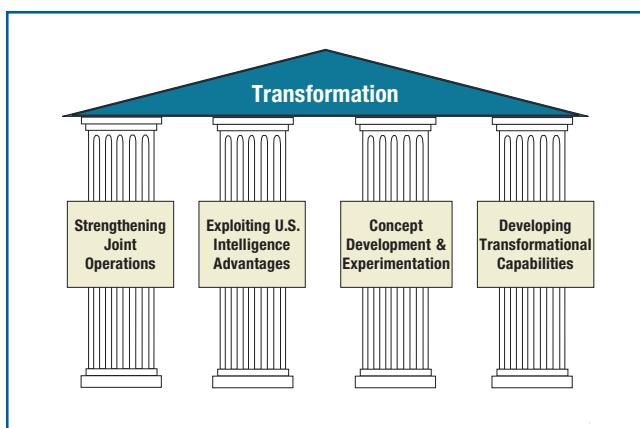
*Secretary of Defense Donald H. Rumsfeld  
at the National Defense University,  
January 31, 2002*

## Defense Transformation - How?

- **Transformed Culture and Processes:** The strategy for achieving transformation in the Department of Defense must begin with an effort to transform the overall culture into one where innovation and informed risk taking are encouraged and rewarded – a culture that is characterized by the information age. This must be done through leadership development and education, an increased emphasis on concept development and experimentation, and changes in the personnel system and incentive structure. Senior leadership must set the example by fostering innovation and adopting information age technologies and concepts.

In addition to transforming the culture, the Department's overall strategy for implementing transformation includes the transformation of key management processes including: a joint capabilities-identification process to better identify and assess specific options for mitigating future risks; a transformed strategic analytic capability to support the recently established capabilities-based planning process, and a more adaptive and flexible acquisition process to replace the Cold War era acquisition system that functioned well when the principal adversary was well known and predictable.

- **Four Pillars of Force Transformation:** There are four pillars, shown in *Figure 2*, around which the Department has built its force transformation implementation strategy: (1) strengthening joint operations through the development of joint operations concepts and architectures; (2) exploiting existing U.S. intelligence advantages through enhanced exploitation and broader dissemination of global surveillance and reconnaissance information; (3) innovative concept development and experimentation through wargaming, simulations and field exercises; and (4) developing new transformational capabilities, building on the successful pursuit of the first three pillars. Successful implementation of the Department's force transformation strategy will accelerate the ongoing shift from an industrial age to an information age military. This is a matter of developing competency for the new age. Future military operations will be conducted using more network-centric forces. The tactical and operational effectiveness of widely dispersed forces will be enhanced by increasing information sharing via a secure network that provides actionable information at all levels of command. This in turn will create conditions for increased speed of command and opportunities for self-synchronization across the battlespace. The first step towards the development of a network-centric joint force is to invest more now in the four military transformation pillars.



*Figure 2: The Four Pillars of Force Transformation*

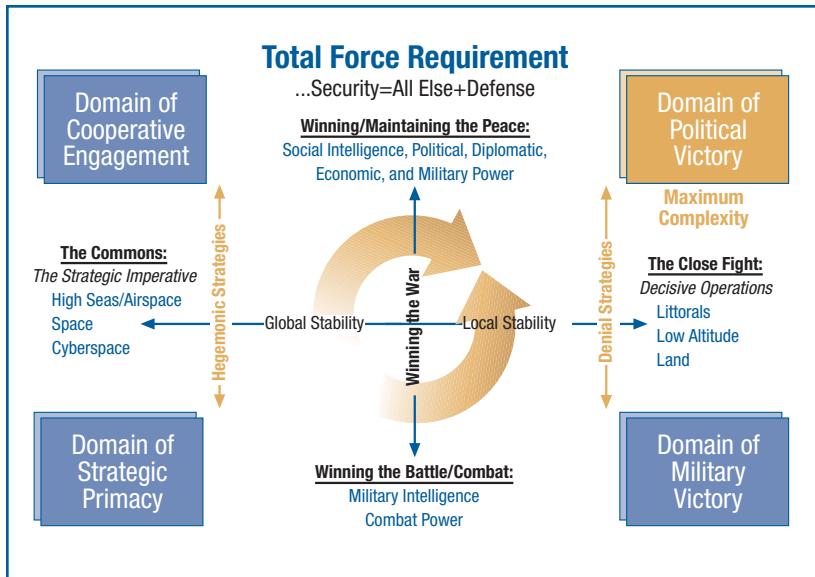


Figure 3: Security = All Else + Defense

- **Security = All Else + Defense:** As part of the overall transformation of the Department, there needs to be a clear recognition that the national security of the United States cannot be guaranteed by military prowess alone, although that is a necessary precondition for success.

U.S. military forces are now likely to find their opponents retreating into more complex terrain, thereby forcing us to engage in the “close fight.” We have no peer competitors at this time that can seriously challenge us in “the commons” – on the high seas, in the air, in space or even in cyberspace. However, we are still susceptible to being challenged in the “close fight” by low cost/ low tech devices such as improvised explosive devices (IED’s) alongside our lines of communications, by mines in coastal waters, or by shoulder-fired surface-to-air missiles launched at low-flying helicopters, transport aircraft or commercial airliners. (See Figure 3)

More significantly, in our nation-building endeavors in Iraq, Afghanistan, or Haiti, our troops need to be able to shift roles, on a block-by-block basis, serving as diplomats one moment, peacekeepers the next, and warfighters when under ambush, in order to win the peace and not just the battle. For this kind of mission, intelligence becomes key, and social and cultural intelligence even more valuable than conventional military intelligence, as we strive to prevail in the domain of political victory as well as the domain of military victory.



*“Thus we see a change in our intelligence capabilities – the value of military intelligence is exceeded by that of social and cultural intelligence. We need the ability to look, understand, and operate deeply into the fault lines of societies where, increasingly, we find the frontiers of national security.”*

*Vice Admiral (Ret.) Arthur K. Cebrowski,  
Director Office of Force Transformation,  
Statement for the House Armed Services  
Committee, February 26, 2004*



## Force Transformation Vision



*“...our overall goal is to encourage a series of transformations that in combination can produce a revolutionary increase in our military capability and redefine how war is fought. The capabilities demonstrated in Afghanistan show how far we have come in the ten years since the Persian Gulf War. But they are just a glimpse of how far we can still go.”*

*Deputy Secretary of Defense Paul Wolfowitz, Testimony before the Senate Armed Services Committee, April 9, 2002*

### **Primary Characteristics of the Emerging Way of War**

Although the concept of what the future force will look like and how it will conduct military operations is still evolving, two salient characteristics seem to stand out: (1) It will be a **joint, network-centric force**; and (2) It will be capable of executing **effects-based operations** (EBO), enabled by NCW.

Already, the combination of modern technology and new operational concepts has enabled networked units and individual platforms to operate together in ways not considered possible just a few years ago. Network-centric warfare (NCW) is characterized by the ability of geographically dispersed forces to attain a high level of shared battlespace awareness that is exploited to achieve strategic, operational, and tactical objectives in accordance with the commander's intent. This linking of people, platforms, weapons, sensors, and decision aids into a single network creates a whole that is clearly greater than the sum of its parts. The result is networked forces that operate with increased speed and synchronization and are capable of achieving massed effects, in many situations without the physical massing of forces required in the past.

The emerging way of war, constructed around the fundamental tenets of NCW and emphasizing high-quality shared awareness, dispersed forces, speed of command, and flexibility, will allow U.S. forces to exploit the potential of EBO in achieving strategic, operational, and tactical objectives. In the process of transforming the way that we fight, we should emerge with a force that is more **expeditionary, agile, and lethal** than the present force and more capable of employing **operational maneuver and precision effects** capabilities to achieve victory. The battlespace is expected to be a more dispersed one, within which our forces will conduct non-contiguous, mutually supporting operations. These operations will seamlessly tie in other government agencies, as well as multi-national partners, in order to permit a smooth transition from Major Combat Operations (MCO) to Stability Operations.



## What Is Needed to Support This Vision?

The realization of the Department's vision for a joint, network-centric force capable of conducting military operations in accordance with the principles of the emerging way of war will depend on a significant improvement in the volume and quality of the intelligence available to commanders, staffs, units, and individuals at all levels and a more flexible, responsive concept of combat logistics.

More persistent intelligence, surveillance, and reconnaissance (ISR) capabilities will be needed to ensure sufficient battlefield awareness to support dispersed but collaborative operations. Vastly improved, deep penetration intelligence is needed to support tactical and operational maneuver, precision strikes, and other EBO's. NCW alone will not be effective if the common operational picture (COP) is not supported by timely and accurate intelligence. Although the technological capability exists to put ordnance very precisely on target, such capabilities cannot be fully leveraged for EBO unless we know exactly what enemy forces are present in near-real-time and have a clear sense of exactly what the proposed target's value is to the other side.

At the same time, vastly more adaptive logistics are also needed to support global operations despite a move towards 80% homebasing of the force. "Sense and Respond" logistics (*Figure 4*) is a promising new concept offering great potential to provide a more responsive logistics capability for our forces. In this concept, still undergoing development, experimentation, and testing, the logistics support organization is equipped to monitor supply usage forward and expedite replacement supplies to where they are needed without creating cumbersome rear echelon stockpiles.

One of the natural developments to be expected, as we strive to improve the quality and quantity of intelligence and make logistics support more dynamic and adaptive, is a lessening of the traditional boundary lines between intelligence, logistics and operations. Rather than being viewed as separate functions they need to be seamlessly planned and executed as interdependent parts of the overall campaign plan in the emerging way of war.

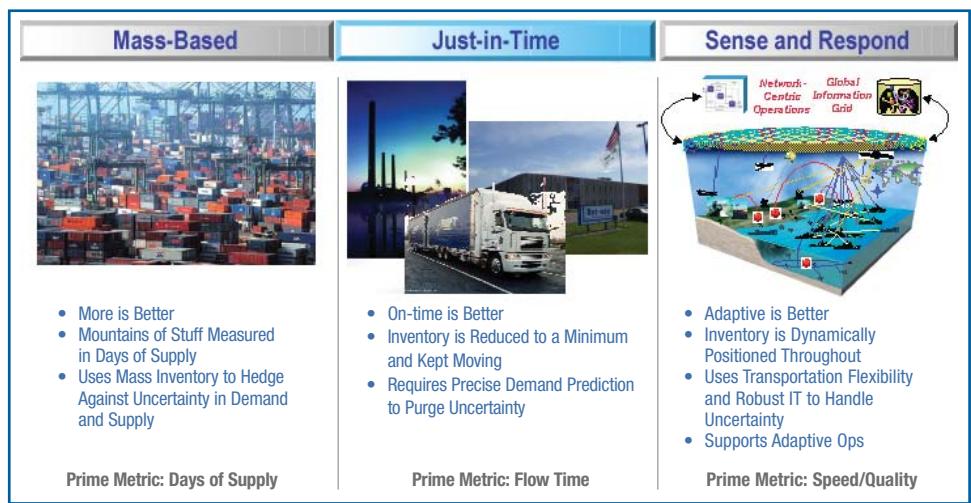


Figure 4: Transforming Logistics



*“But really, this is precisely what transformation is all about. Here we are in the year 2002, fighting the first war of the 21st century, and the horse cavalry was back and being used, but being used in previously unimaginable ways. It showed that a revolution in military affairs is about more than building new high tech weapons, though that is certainly part of it. It’s also about new ways of thinking, and new ways of fighting.”*

*Secretary of Defense Donald H. Rumsfeld  
at the National Defense University  
January 31, 2002*



### **Examples of Force Transformation**

There is a natural tendency to equate “military transformation” with “military modernization.” While the latter is very important (the natural process of improving equipment and training, etc. as time progresses), what is meant by “transformation” is decision-making according to new rules, a more innovative and revolutionary change that creates a whole new warfare environment.

Historically, such sea changes were demonstrated by the Napoleonic ability to mobilize and inspire whole nations for war at the beginning of the 19th century or the blitzkrieg tactics developed by the Germans in the mid 20th century. Napoleon’s *levee en masse* forced the entire world to rethink how it waged war, while the Wehrmacht’s innovative employment of armor and tactical air in combination overwhelmed the Allies until they adapted by following the German model.

In more recent history, we have achieved some notable transformational changes. The Global Positioning System (GPS), one of the best known examples of transformation, gave the U.S. forces a tremendous advantage over Iraqi forces in 1991 during Operation Desert Storm. Its advent changed the military, the Department, and civil society. Another example of transformation has been the U.S. Army’s successful efforts to “own the night,” combining new night vision technology with innovative operational concepts.

In recent operations both in Iraq and Afghanistan, the U.S. military has demonstrated an impressive ability to adapt and transform. In Afghanistan, U.S. special operations forces (SOF) were able to call in precision air strikes by B-1s, B-52s, and other U.S. aircraft to support the Northern Alliance offensive at Mazar-i-Sharif. This innovative use of existing technology proved highly effective, dramatically affecting operations and hastening the defeat of the Taliban.

On a broader field of battle in Iraq, while heavy armor and mechanized units pushed rapidly towards Baghdad in the main effort, lightly armed SOF, airborne, and air mobile forces in unprecedented numbers were used to prosecute supporting but dispersed operations in the south, north, and west of the country. The U.S. and allied forces shared a COP to a degree not previously achieved in battle and the speed of their movements precluded the demoralized (although numerically superior) Iraqi army from being able to mount a credible defense or counter-attack.



# Force Transformation Implementation

## Force Transformation Roles and Responsibilities

Because of the ambitious, all encompassing nature of the Defense Department's transformation strategy, it affects all branches of the Department and requires innovative senior leadership throughout the organization. The April 2003 *Transformation Planning Guidance (TPG)* approved by the Secretary of Defense identifies the primary senior leadership roles and responsibilities for executing and implementing the transformation strategy:

- **Secretary of Defense:** sets the Department's transformation policies and objectives, defines the roles and responsibilities of the Department's senior leadership in executing the transformation strategy, and is the final approval authority on all major elements of the transformation strategy.
- **Chairman of the Joint Chiefs of Staff (CJCS):** advises the Secretary on the best approach to balancing the four risk areas described in the 2001 *Quadrennial Defense Review (QDR)* Report, especially operational and future risk, and is responsible for overseeing development of joint concepts and validating joint warfighting requirements.
- **The Director, Office of Force Transformation:** acts as the advocate, focal point and catalyst for transformation within the Department. He monitors and evaluates the implementation of the Department's transformation strategy, advises the Secretary, manages the transformation roadmap process, and helps to ensure that joint concepts are open to challenge by a wide range of innovative alternative concepts and ideas.
- **The Commander Joint Forces Command and other Combatant Commands:** are responsible for developing joint warfighting requirements, conducting joint concept development and experimentation, and developing specific joint concepts assigned by CJCS. Commander, JFCOM is also responsible for coordinating the concept development and experimentation efforts of the Combatant Commands and for producing a Joint Transformation Roadmap to achieve joint capabilities required by joint concepts.
- **Secretaries of Military Departments and Service Chiefs of Staff:** are responsible for developing specific concepts for supporting operations and core competencies, for overseeing Service experimentation, and building the transformation roadmaps to achieve transformational capabilities to enable those concepts.



## Force Transformation Issues

As part of the Department's ongoing effort to implement the force transformation strategy and identify promising areas for increased emphasis and investment, the Director, Office of Force Transformation (OFT), has recommended a number of important force transformation issues as "candidates for action now." The *Strategic Planning Guidance (SPG)* provides additional emphasis and specific guidance on many. However, if these issues are not adequately addressed in the near future, they may become lost opportunities or "issues of regret" in the more distant future.

Key force transformation issues identified by the Director, OFT, are grouped under six major battlespace functional areas or warfare elements: (1) fire, (2) maneuver, (3) protection, (4) command & control and communications (C2&C), (5) intelligence, surveillance and reconnaissance (ISR), and (6) logistics.



- **Fire:** Although considerable attention and investment has been devoted to increased lethality and precision fire, much less has been devoted to **non-lethals** or **directed energy and redirected energy weapons** that can be used both for lethal and non-lethal purposes (including lasers, communications and sensing).
- **Maneuver:** This is another area that needs more emphasis to include not only the procurement of air and sea assets to support **operational maneuver** and **vertical battlefield** operations, but also the development of innovative ways to **sea base** joint task forces to simplify the problems associated with getting access to global theaters of operations.
- **Protection:** In the area of force protection, there is clearly a need for improved **active and passive biomedical countermeasures** to deal with the increasing likelihood of having to face Chemical, Biological, Radiological, Nuclear and Enhanced high explosives (CBRNE) weapons effects on the battlefield. Likewise there is an urgent need to study, train, and practice techniques and procedures for operating in **urban terrains**, where the goal is not to take over or destroy, but rather to stabilize, rebuild and keep functioning vital economic and social infrastructures as we are having to do today in Iraq and Afghanistan.
- **C2&C:** In the field of command and control and communications, the movement towards a **robust networked force** with which all DoD communications will interoperate, is promising. The overall goal is not only increased interoperability, but also increased interdependency as this system of systems is put into place.

- **ISR:** In the fields of intelligence, surveillance, and reconnaissance there is an urgent need for more **tactically responsive space assets** – low cost tactical satellites that can be launched quickly with tailored packages in direct support of joint task forces (*Figure 5*). Likewise, there is a need for more **horizontal integration** of the various sources of intelligence and a **demand-centered intelligence** system.
- **Logistics:** Finally, in the field of logistics, there is a clear need for a more dynamic, **demand-centered logistics** construct to support the more widely dispersed battlefield and permit a truly adaptive, agile and joint logistics system.

### Measuring the Force Transformation Process

When specific suggestions for force transformation are evaluated by the Director, OFT and others, a “measuring stick” or methodology is needed to assess potential transformational effectiveness. To this end, two important questions should be asked:

*“Will the proposed change profoundly affect the competition more than the legacy forces?” and*

*“Does it allow us to do something that we cannot currently do?”*

These seven additional questions may be used to further measure the transformational value of systems or concepts under consideration:

- Does it increase our capability to dominate in the sensor war?
- Does it reduce or eliminate the enemy’s ability to create “No Man’s Lands?”
- Does it compress and seamlessly integrate the cycle for planning, organizing, deploying, employing, and sustaining U.S. forces?
- Does it establish new command structures that leverage networked capabilities?
- Does it turn an information advantage into a competitive advantage?
- Does it radically reduce the logistical demands of deployed forces?
- Does it create concepts and capabilities to operationalize Information Superiority?

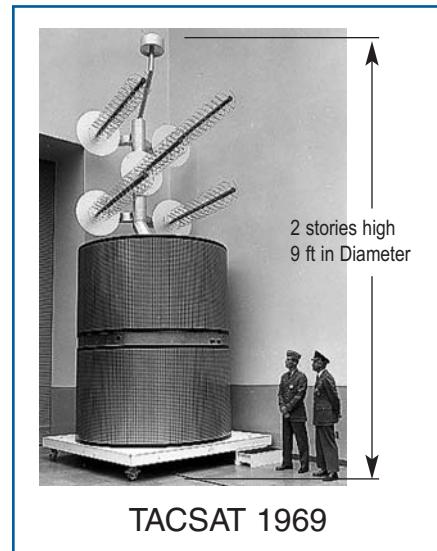
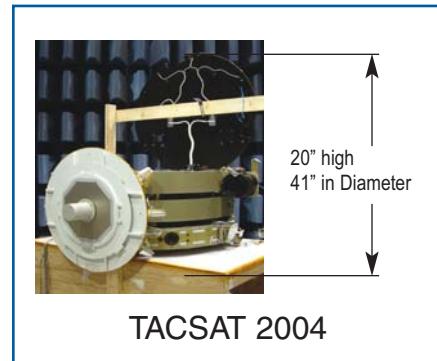


Figure 5: Responsive Tactical Micro-Satellite Concept

# Conclusion



## ***Innovation = Creativity x Implementation***

Transformation is a continuing process designed to help define the competitive space where current U.S. comparative advantages will be maintained out into the future. Innovation, so vital to the transformation process, is dependent upon creativity—the development of new organizational and operational concepts, processes, and technologies. For meaningful innovation to occur, however, creativity alone will not be sufficient; implementation is equally important. Without interested customers to conduct experiments, demonstrations, tests, and evaluations, and ultimately, adopt new concepts, processes, and technologies for the conduct of real-world operations, innovation will not occur.

Together, creativity and implementation will have a multiplying effect in providing our forces with innovative new capabilities (see Figure 6). We must encourage innovation and the sharing of knowledge and operational experimentation among the Services and with our multinational partners. This will enable us to discourage and ultimately defeat the development of new capabilities and effective asymmetrical strategies by our current adversaries and future competitors.

An overall goal of transformation is to broaden the capabilities base of the U.S. and our allies and multinational partners. It is in the close fight that transformation arguably is most important and where we are most likely to see the results of falling barriers to competition. For naval forces, diesel submarines, mines and small boats can make littoral warfare the most difficult to dominate. For land forces, urban terrain, such as we encountered in Lebanon and Somalia and now face in Iraq, poses an extremely difficult challenge. In cities or built-up areas, particularly when we are fighting terrorists or small units, employing guerilla tactics, our high technology advantages are least effective. For the air forces, employing both fixed and rotary wing aircraft, it is in airspace under 15,000 feet, in particular, where simple-to-use, shoulder-fired weapons often present a dangerous threat. As cyber-space becomes more globally integrated, we need to guard against its hostile use by talented hackers determined to attack our critical economic and military databases.

Figure 6: Concept of Innovation



## Preventative Versus Punitive Defense

Through defense transformation—transforming how we do business inside the Department; transforming how we work with others, especially with other agencies of our own government and with our multinational partners; and transforming how we fight by continually seeking to develop significant, innovative new capabilities in our forces—the Department will be able to achieve the six operational goals of transformation set forth in the QDR (*Figure 7*) and deal effectively with unforeseen operational requirements likely to arise in the future.

Further, transformation will enable our forces to achieve strategic and operational objectives, in concert with allies and multinational partners, by conducting preventative actions during the early stages of a crisis rather than having to take punitive actions after a crisis has developed. Such a strategy will, of course, depend on our ability to obtain early and unambiguous warning of threats in advance so that we can signal our resolve clearly to potential aggressors and thus decrease the likelihood of conflict breaking out in the first place. Our goal, simply stated, is to deter forward. We will accomplish this goal by decisively altering the conditions of the crisis at the earliest possible stage.

To have a preventative capability will require a sufficiently robust intelligence indications and warning (I&W) capability to provide early warning. At the same time, we must possess a sufficiently robust operational deployment capability to respond quickly to situations as they arise around the world. In situations where host countries are reluctant to grant basing and transit rights, U.S. forces must be able quickly to alter their deployment plans and redirect their forces using operational maneuver from the sea or strategic distances.

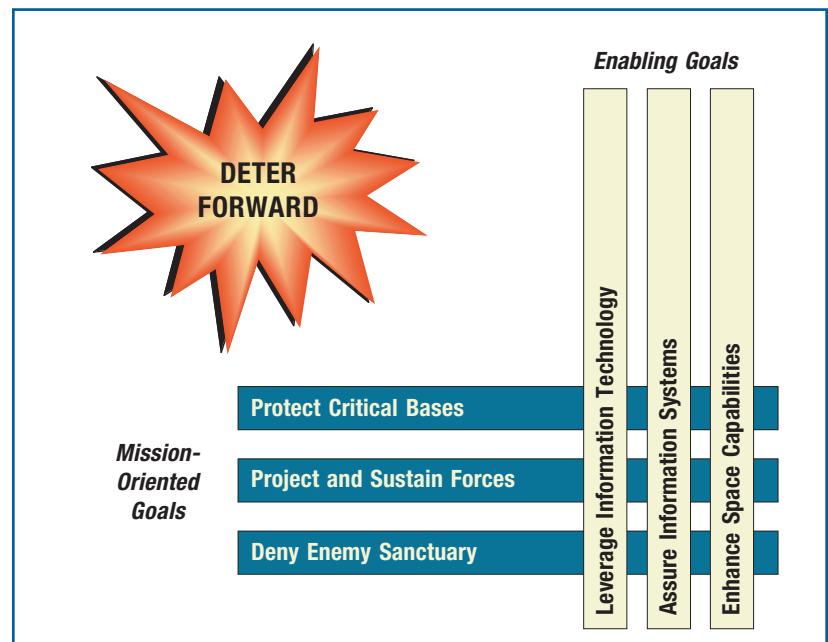


Figure 7: Six Operational Goals of Transformation

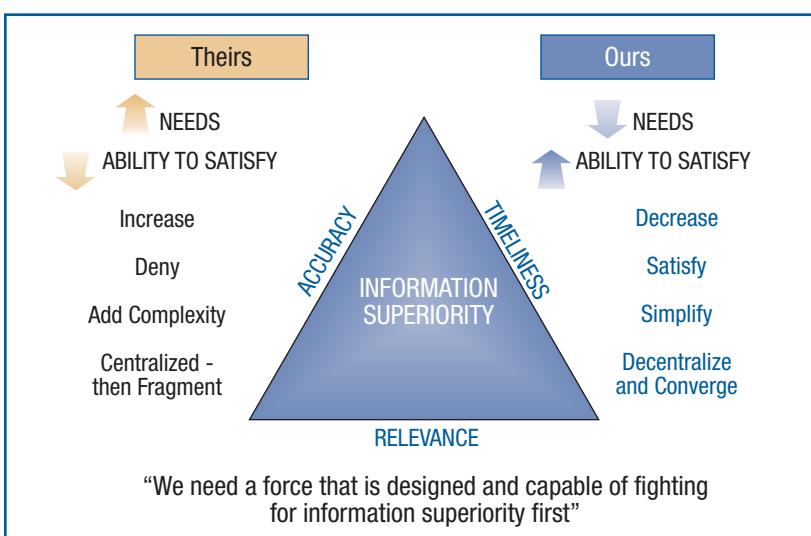


## Search for Sustained Competitive Advantage

The overall goal of force transformation in the Department is to ensure that the present superiority of the United States is sustained in the future despite the attempts of potential adversaries to emulate our new approach to warfare or to develop asymmetrical strategies that target those areas where we may appear to be vulnerable.

Currently, we enjoy a powerful strategic advantage over our adversaries, particularly in three key areas of competition – aerospace, sea, and cyber-space. However, our position can be challenged in the future by potential adversaries in all three areas and others, due in part to falling barriers to competition. The transformation process aims to ensure that we maintain our lead in all of these areas.

As shown in *Figure 8*, in the fight to gain and maintain information superiority, we must constantly readjust the balance between our forces and those of our adversaries, making it increasingly complicated for them to satisfy their information needs while simultaneously decreasing and simplifying our own.



In the current and projected future strategic environment, we must retain our competitive advantages in the crucial areas of information superiority and decision superiority. As described in the *Joint Operations Concepts* document, the ability to gain and maintain decision superiority is a key requirement for U.S. forces today and is likely to remain so for the foreseeable future.

The objective of decision superiority is to turn an information advantage into a competitive advantage. To facilitate decision superiority, our forces must gain and maintain information superiority, an imbalance in the information domain with respect to the adversary. The power of superiority in the information domain mandates that the U.S. fight for it as a first priority, even before hostilities begin.

Figure 8: Competitive Advantage - Information Superiority



## Top Five Goals of the Office of Force Transformation

- *Make force transformation an integral element of national defense strategy and DoD corporate strategy effectively supporting the four strategic pillars of national military strategy.*
- *Change the force and its culture from the bottom up through the use of experimentation, transformational articles (operational prototyping), and the creation and sharing of new knowledge and experiences.*
- *Implement Network Centric Warfare (NCW) as an emerging theory of war for the information age and the organizing principle for national military planning and joint concepts, capabilities and systems.*
- *Get the decision rules and metrics right and cause them to be applied enterprise-wide.*
- *Discover, create, or cause to be created new military capabilities to broaden the capabilities base and to mitigate risk.*

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### OFFICE OF PRIMARY RESPONSIBILITY

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Date of Publication: October 2004

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Cleared for public release by Department of Defense Office of  
Freedom of Information and Security Review, 04-S-3000

